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- (71) Applicant(s)
MONSANTO EUROPE S.A.
- (72) Inventor(s)
STEPHEN FREDERICK KELSEY; GERARD MICHAEL O'BRIEN; DAVID EUGENE SALMON; IAN HAYWARD CROWTHER
- (74) Attorney or Agent
E F WELLINGTON & CO, 312 St Kilda Road, MELBOURNE VIC 3004
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US 5058772
US 4890770
- (57) Claim

1. A dispensing closure comprising

- a spout element (300) adapted for being assembled with a corresponding container neck (500), and comprising an axially outwardly projecting pouring spout (301), a circumscribing wall (303) defining an essentially annular groove (305) around the spout (301), and drain means (307), the spout element (300) comprising fastening means (309, 311, 319) for assembling with the container neck (500);

- closure cap (100) adapted to be used as a measuring cup and equipped with fastening means (105) for assembling with the spout element (300);

characterized by the fact

- that the circumscribing wall (303) extends like a yoke (309) over the rim of the container neck (500) and projects into a skirt (311) which is essentially parallel to the circumscribing

wall (303) and which is equipped with fastening means (319) on the inner side (317) of the skirt (311), for assembling with corresponding fastening means (503) on the container neck (500);

- that the circumscribing wall (303) has fastening means (315) on the surface (313) oriented to the pouring spout (301) for assembling with the closure cap (100);

- that the closure cap (100) comprises an essentially tubular measuring cup (101), the open end (103) of which being equipped with fastening means (105) adapted to mate with the corresponding fastening means (315) on the circumscribing wall (303) of the spout element (300);

- that the closure cap (100) comprises a spaced, surrounding, external wall (107) which is connected to the measuring cup (101) at a distance from the open end (103) thereof for protecting the user's hand; and

- that in the closed position of the closure cap (100), the said external wall (107) extends essentially to the level of the upward surface of the spout element yoke (309) that bridges the rim of the container neck (500).

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Name of Applicant: MONSANTO EUROPE S.A.

Actual Inventor/s: STEPHEN FREDERICK KELSEY
GERARD MICHAEL O'BRIEN
DAVID EUGENE SALMON and
IAN HAYWARD CROWTHER

Address for Service: E.F. WELLINGTON & CO.,
Patent and Trade Mark Attorneys,
312 St. Kilda Road,
Melbourne, 3004, Victoria.

Invention Title:

"IMPROVED DISPENSING CLOSURE"

Details of Associated Provisional Applications Nos:

The following statement is a full description of this invention
including the best method of performing it known to us.

5 The present invention relates to an improved dispensing closure intended to be used on containers for liquid products. More particularly, the improved dispensing closure is adapted for liquid containing containers for residential or domestic use.

The prior art discloses a large number of dispensing closures for different types of products.

10 As an example, EP-A-0 348 102 discloses a liquid dispensing package which includes a liquid container and a drainback spout fitment fitted within a dispensing opening in a finish at the upper end thereof. A measuring cup is threadedly engageable with the fitment and finish to enable closing off of the container. The fitment includes a frustoconical downwardly depending side wall surrounding the
15 spout. A drainback channel between the spout and sidewall drains back drips to a drain opening and hence into the liquid container. An interlock and centering means is provided between the finish and fitment to center the fitment with respect to the finish to assist the sealing system in
20 preventing leaks as well as to prevent rotation of the fitment when the cup is rotated out of engagement. According to the drawings, the measuring cup has a generally cylindrical side wall with a radially outwardly depending skirt 62. The interior wall of the skirt comprises a
25 plurality of threads for engagement with corresponding threads on the outer wall of the container finish and of the outer wall of the spout fitment skirt.

EP-A-0 369 560 discloses a dripless closure assembly for a container comprising a body which is seated in the neck of

the container and which has a pouring spout. A measuring cup which also functions as a cap is disposed over the pouring spout and has a first threaded outwardly disposed skirt for threaded engagement with the neck of the container. A second
5 skirt inward of the outer skirt and extending into the body is provided for preventing drips reaching the threads.

EP-A-0 275 833 is directed to a plastic closure cap for a container, having a spout element and a cap that may serve as a measuring cup. The spout element forms with a
10 surrounding wall an annular trough around the pouring spout which engages the cup edges when the cup is in closed position. The measuring cap has a threaded annular wall arranged centrally in the bottom of the cap for matching engagement with the tubular spout.

15 GB-A-2 150 102 discloses a package for liquids comprising a container with an upwardly extending finish; a transition collar mounted on said finish, said collar having an axially outwardly extending pouring spout, a circumscribing wall with fastening means on its interior
20 surface and drain means; and a measuring cup adapted as a cap with fastening means on its external surface for matching engagement with corresponding fastening means on said transition collar. The open mouth of the cup terminates with a radially outwardly flared lip said to work as drip-
25 prevention when the cap is used as a cap, and as an inner seal in contact with the annular internal wall of the transition collar when the cap is in the closed position.

A similar embodiment is disclosed in GB-A-2 238 304. According to this reference, the dispensing closure comprises
30 a two-piece closure including a spout portion which is threaded onto the container neck, and a cap portion which includes a depending collar with shielded threads to prevent their exposure to the contents of the container during pouring, when the cap is used as a measuring cup.

US-A-5 101 993 discloses a similar closure where a sealing material is applied to the container neck just prior to the engagement of the closure and the container neck so that the said sealing material may fill in any gaps, imperfections or misalignments between container neck and correspondingly matching closure surface.

DE-A-38 20 428 describes a dispensing closure similar to the one disclosed in GB-A-2 238 304 and US-A-5 101 993, where the cap is presented as a measuring cup screwed on the spout element.

EP-A-0 367 980 discloses a two part closure for a container containing liquids, comprising a spout element and a cap. The spout element is inserted by pressure into the neck of the container and the sealing cap is screwed on an outer thread of the container neck and on a thread on the inner side of the surrounding wall of the spout element via a thread on the central core of the cap.

The prior art dispensing closures, while not restricted to a particular use, are generally intended for domestic or residential use with laundry products, such as liquid detergents, softeners, bleach and the like. These prior art closures, however, do not comply with all requirements now imposed on domestic or residential packagings, particularly on packagings that are intended for use with regulated products, such as fertilizers, herbicides, insecticides, and other biocides. Even if not yet imposed by all regulatory authorities, it is nevertheless desirable to provide an improved dispensing closure that combines the main characteristics of the prior art dispensing closures mentioned above, such as the ease of manufacturing, the ease of use, the measuring feature, the pouring spout with drain back means of residual liquid, the protection of the assembling threads against spilled liquid, the proper sealing, and possibly other features.

An object of the invention is to provide an improved dispensing closure that does not present the inconveniences of the prior art dispensing closures and that presents advantages over the known dispensing closures.

5 Another object of the present invention is to provide an improved dispensing closure as specified above which is designed in such a way that tamper evidence means and child safety means may be adapted to it, while still maintaining the other advantageous and important features of the prior
10 art dispensing closures.

According to the present invention, the dispensing closure comprises:

-a spout element adapted for being assembled with a corresponding container neck, and comprising an axially
15 outwardly projecting pouring spout, a circumscribing wall defining an essentially annular groove around the spout, and drain means, the spout element comprising fastening means for assembling with the container neck;

-a closure cap adapted to be used as a measuring cup and
20 equipped with fastening means for assembling with the spout element;

and is further characterized by the fact

-that the circumscribing wall extends like a yoke over the rim of the container neck and projects into a skirt which is
25 essentially parallel to the circumscribing wall and which is equipped with fastening means on the inner side of the skirt, for assembling with corresponding fastening means on the container neck;

-that the circumscribing wall has fastening means on the
30 surface oriented to the pouring spout for assembling with the closure cap;

-that the closure cap comprises an essentially tubular measuring cup, the open end of which being equipped with fastening means adapted to mate with the corresponding

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fastening means on the circumscribing wall of the spout element;

-that the closure cap comprises a spaced, surrounding, external wall which is connected to the measuring cup at a distance from the open end thereof for protecting the user's hand; and

-that in the closed position of the closure cap, the said external wall extends essentially to the level of the upward surface of the spout element yoke that bridges the rim of the container neck.

10 The arrangement of the closure device according to the present invention, more particularly the arrangement of the spout element in association with the closure cap, allow a safe handling of the dispensing closure. Indeed, the external wall of the closure cap prevents the user's hand
15 contacting any residual liquid that may flow along the measuring cup wall after liquid has been poured out through the pouring spout. Exposure of the user to the container content is also reduced when the closure is re-closed.

According to a preferred embodiment of the invention,
20 the dispensing closure is further characterized in that the external wall of the closure cap is made of a resilient material and that the spout element and the resilient external wall of the closure cap have interacting locking means adapted to be unlocked by resilient deformation of the
25 said external wall.

This preferred embodiment of the invention provides a safe child safety arrangement. Indeed, by squeezing the resilient external wall, the said wall is deformed and may thus overcome the interacting locking means. The pressure
30 required to squeeze the external wall may be calculated such that it cannot be provided by a child.



Furthermore, the spout element yoke of the dispensing closure according to the present invention may be equipped with an essentially upstanding breakable ring which circumscribes the cap external wall when the closure is in closed position. This embodiment constitutes a suitable, safe and compact arrangement of tamper evidence means. Due to the arrangement of the breakable ring on the spout element yoke, around the resilient external cap wall, the interacting locking means may obviously not be unlocked by deformation of the said resilient external wall as long as the said breakable ring is not broken off.

According to a preferred embodiment of the present invention, the interacting locking means consist in at least one, more preferably two opposed, essentially upwardly extending projections solid or integral with the spout element yoke, and engaging with a corresponding notch or with corresponding notches in the resilient external wall of the closure cap.

Preferably, the projection is of the dovetail type showing in the direction of the central axis of the dispensing closure. According to this preferred embodiment, an attempt to disassemble the closure cap from the spout element by rotation of the cap without squeezing it or with insufficient squeezing effort would fail and block the closure cap by slight inwardly deformation of the resilient external wall in the zone of the interacting locking means.

The fastening means for assembling the spout element with the container neck advantageously consist in a thread adapted on the inner side of the skirt and adapted to mate with a corresponding thread on the outer surface of the container neck. Similarly, the fastening means for assembling the closure cap with the spout element consist in a thread arranged on the inwardly oriented surface of the



circumscribing wall and on the open end of the measuring cup.

The assembling of the spout element with the container may comprise a further tamper evidence means known per se. According to another embodiment of the invention, the spout
5 element may be provided with downwardly oriented projections that mate with corresponding ratchet means arranged on the neck of the container. Such ratchet means known per se should allow easy assembling of the spout element with the container but should also prevent the spout element being disassembled
10 from the container without damaging the closure.

It may be desirable to correctly position the spout element with its pouring spout for proper pouring of the liquid out of the container. The correct positioning may be achieved by suitable downwardly oriented projections on the
15 spout element that mate with corresponding ratchet means on the container neck.

The dispensing closure of the present invention also ensures proper sealing. A first sealing area between the spout element and the neck of the container may
20 advantageously be provided on the surface of the circumscribing wall which is directed towards the neck of the container, more preferably close to the yoke. A second sealing area between the closure cap and the spout element may be arranged at the end of the circumscribing wall which
25 is close to the yoke bridging the rim of the container neck and which interacts with a corresponding part of the measuring cup.

For ease of manufacturing, the circumscribing wall may extend above the yoke and form an upstanding ring on the said
30 yoke or even a secondary spout oriented as the spout disclosed above. Preferably, the upwardly directed yoke surface is slightly inclined to the central axis of the dispensing closure system, and forms with the said upstanding

ring a small reservoir for liquid that may have been spilled on the resilient secondary wall of the closure cap.

The invention is disclosed in more detail by way of the description following hereafter with reference to the corresponding Figures in which:

- Figure 1 represents a schematic partial side view and partial cross-section of a closure cap according to a first embodiment of the invention;
- Figure 2 is a schematic partial side view and partial cross-section of a spout element adapted to mate with the closure of Figure 1;
- Figure 3 is a schematic top view of the spout element of Figure 2;
- Figure 4 shows a side view of a container neck adapted to receive the dispensing closure according to the Figures 1-3;
- Figure 5 shows a top view of same;
- Figure 6 is a schematic view of a closure cap corresponding to the view of Figure 1, according to another embodiment of the invention;
- Figure 7 is a top view of the closure cap of Figure 6;
- Figure 8 is a schematic view of a spout element corresponding to the closure cap of Figure 6; and
- Figure 9 is a top view of the spout element of Figure 7.
- Figure 10 is a schematic view of an other embodiment of a spout element.

In the drawings and throughout the description, like reference numerals indicate like elements.

The dispensing device according to the present invention comprises a closure cap 100, and a spout element 300 adaptable to a neck of a container 500. Each element of the dispensing closure according to the present invention is described in more details hereafter.

Referring to Figure 1, the closure cap 100 of a generally circular shape comprises an essentially tubular measuring cup 101. The open end 103 of the said measuring cup is equipped with a thread 105 (preferably a double thread) for adapting the said cap closure 100 to the spout element 300 fixed to a container neck 500. The said closure cap further comprises a spaced surrounding external wall 107 which is connected to the measuring cup 101 at distance from the open end 103, preferably close to the bottom 109 of the measuring cup, that is the top surface of the closure cap when placed in closed position. The inner wall surface 111 of the measuring cup 101 advantageously has graduation bars 113 impregnated or embossed or otherwise made visible on the wall material, which are intended to indicate to the user the volume of product poured into said cup. Preferably, the closure cap or at least the external wall thereof is made of a resilient material, such as a plastic material, more preferably a translucent plastic material, such as polyethylene or polypropylene. In such a case said graduation bars may also be applied on the outer surface of the cup wall 101 or on the external wall 107.

Turning now to Figures 2 and 3, the spout element 300 comprises an axially outwardly projecting pouring spout 301 a circumscribing wall 303 which defines an annular groove 305 around the spout 301, and drain means 307 that may be circular or elongated like a croissant. The circumscribing wall 303 is adapted to extend like a yoke 309 over the rim of a container neck (as described in more detail below) and then projects into a skirt 311 which is essentially parallel to the circumscribing wall 303. The surface 313 of the circumscribing wall, which faces the spout 301 has a thread 315 intended to cooperate with the threaded part 105 of the closure cap 100. Furthermore, the said skirt 311 has on its inner side 317 a thread 319 intended to engage a corresponding part on the outer surface of the said container neck 500.

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The closure cap 100 and spout element 300 of the present invention may further comprise child safety means. Such child safety means may comprise a dovetail type projection 321 arranged on the upwardly directed yoke 309 surface and showing in the direction of the central axis of the dispensing closure, and a corresponding notch 115 arranged in the external wall 107 of the closure cap. When mounted on the spout element 300, the closure cap 100 is prevented from rotation and, hence, from disassembling from the spout element 300, because the closure cap 100 is blocked in its rotation movement by the said dovetail type projection. The obstacle consisting in the dovetail type projection 321, preferably two opposite dovetail type projections, may be overcome by appropriate resilient deformation of the external wall 107 of the closure cap 100. The resistance of the said external wall 107 to deformation may be arranged in such a way that said pressure may not be exercised by a child.

Moreover, the spout element yoke 309 may be equipped with an upstanding breakable ring 323 which is fixed by way of regularly spaced breakable nips on the outward yoke rim and which circumscribes the secondary wall 107. This ring 323 constitutes a tamper evidence means which prevents opening the dispensing closure by disassembling the cap, without breaking the ring 323.

As may be seen on Figure 2 and for reasons of ease of manufacturing, the spout element 300 comprises, on its yoke 309, on the rim directed to the pouring spout 301, an upstanding ring 325 which may also enhance the sealing between the closure cap 100 and the spout element 300. According to a preferred embodiment, the yoke surface is slightly inclined to the central axis, thus constituting with the upstanding ring 325 a small reservoir the function of which is described below.



Figures 4 and 5 represent a container neck 500 integral with a container body 501. Said container neck comprises a thread means 503 which is intended to engage the corresponding part on the skirt 311 of the spout element 300 as described hereabove. The assembling of the spout element 300 with the neck 500 is preferably also protected by tamper evidence means. Such means may consist in downwardly oriented projections 327 which are arranged at the free end of the skirt 311 mating with corresponding ratchet means 505 arranged on the neck 500 at a distance from the neck rim 509, below the thread means 503. As the pouring spout 301 is asymmetric and/or the container neck 500 is not symmetrically arranged on the container, it is preferred to provide positioning means 507 on the container neck, which allow a corresponding positioning of the spout element 300 on the container neck 500 during the assembling operation. Such positioning means may advantageously consist in ratchet means 507 which are oriented according to a direction opposite to the ratchet means 505, and which engage in corresponding notches in the skirt 311. Preferably such a positioning means consist in a thread stop 507.

The dispensing closure of the present invention also provides for proper sealing areas. A first sealing area consists in a ball or bore type seal between the circumscribing wall 303 and the inner surface of the neck 500. A second sealing area is arranged between the closure cap 100 and the spout element 300, on the surface of the circumscribing wall, close to the yoke 309, preferably on the corresponding side of the ring 325. Sealing means may consist in (double) sealing rings such as 117 or 335, respectively.

Whereas the first embodiment of the dispensing closure of the invention as described above is of an essentially circular shape, another embodiment is of an essentially

elliptical shape and will be disclosed in more detail hereafter.

Figures 6 and 7 represent the closure cap 100. Figure 6 is a partial side view partially in cross-section according to the horizontal axis of Figure 7. Figure 7 is a top view emphasizing the shape of the closure cap. The cross-section according to the vertical axis of Figure 7 would be essentially identical to Figure 1. As previously described in relation to Figure 1, the closure cap according to this second embodiment comprises a measuring cup 101 with threads 105 at the open end of the cup, and an external wall 107 integral with the cup arranged at the bottom 109 of the cap. The measuring cup further comprises graduation bars 113 preferably embossed in the cup wall which should enhance the measuring of the content of liquid in the cup. A closure cap 100 made from translucent and resilient plastic material is particularly preferred. In such a case, said graduation bars may also be applied on the outer surface of the cup wall 101 or on the external wall 107.

Figures 8 and 9 show the spout element 300. The partial cross-section of Figure 8 is taken according to the horizontal axis of Figure 9; the cross-section according to the vertical axis would be essentially identical to Figure 2. As may easily be seen, the pouring spout 301, the groove 305 with drain means 307 and circumscribing wall 303, as well as the yoke 309 and the skirt 311 are essentially identical to the corresponding parts of Figures 2 and 3. According to this second embodiment, the yoke 309 is extended in the long axis direction and projects into a second skirt 329. In the embodiment of Figure 8, the so-called reservoir is slightly different from the one described with regard to Figure 2, and is in the form of an annular channel around the upstanding wall 325, with an annular shoulder extending finally into the skirt 329. A tamper evidence ring 323 with a tear off tab 324 is fixed by regularly spaced ribs 331 to the (extended)



yoke 309. Child safety means 321 as described in relation to Figures 2 and 3 are also provided. In Figure 9, as a variant to Figure 2, the drain means 307 is elongated. Moreover, the arrangement of the spout element on the container neck is similar to the arrangement described in relation to Figure 2. In this embodiment, projections 327 integral with the skirt 311 but surrounded by the outer skirt 329 ensure safe assembling of the spout element on the container neck bearing corresponding ratchet means 505.

Figure 10 shows a slightly modified embodiment of the spout element 300 of Figure 8. According to Figure 10, the upstanding ring may extend into a secondary spout 325 which presents essentially the same high as the spout 301 and is oriented in the same way as said spout. The advantage of this embodiment resides in a cleaner cap. The secondary spout prevents liquid from dripping or splashing out of the cap when opening the packaging while (inadvertently) squeezing the bottle.

The different parts of the dispensing closure are preferably made of plastic materials and produced by injection molding. The tamper evidence ring may be blown integral with the spout element or may be made integral therewith after blowing. In order to facilitate the assembling of the closure as well as the arrangement thereof on the container neck, the closure cap and the spout element may be preassembled, and the preassembled dispensing device may then be arranged on the container neck, when the container has been appropriately filled. Although the closure cap and the spout element may be assembled by a relative rotation movement according to the thread inclination (which would require the tamper evidence ring to be made integral with the spout element after the closure cap has been placed onto said spout element), it is preferred to have the threads shaped in such a way for instance asymmetric and/or interrupted, that they allow for an essentially vertical snap

type assembling. Such an assembling operation would allow the tamper evidence ring to be blown integral with the spout element. The same may be applied to the threads between the spout element and the neck of the container. It is
5 nevertheless advisable to design the threads in such a way that they allow for a snap type assembling but prevent disassembling in a similar way, and only allow for disassembling by unscrewing.

The dispensing closure may be used as follows:

10 When used for the first time, the user tears off the tamper evidence ring by means of the tab 333, since otherwise the closure cap may not be unscrewed. The user may now exert pressure on the resilient external wall in such a way that the deformation allows the external wall to disengage the
15 notches from the dovetail type projections and to, hence, overcome said obstacles (321). The user may then unscrew the closure cap and invert it in order to be able to use it as a measuring cup. The user then inclines the container to fill the measuring cup up to the required level marked by the
20 measuring bars. The liquid flows through the pouring spout which prevents or at least reduces the risks of spilling liquid. The container is then placed back in upright position. Liquid that may have been spilled along the outside surface of the pouring spout or the circumscribing wall is
25 drained back to the container via the groove and the drain means. The user may now pour the cup content for dilution into a larger can which may for instance contain water. During all these operations, user's hands are protected against spilled liquid by the external closure wall. Even
30 if, after several uses, some liquid runs along the outside surface of the cup wall, such liquid will not enter into contact with user's hands. When the closure cap is placed back onto the container neck, residual liquid may flow into the groove and is drained back into the container. Liquid possibly spilled on the outside surface of the measuring cup may flow along said wall until it reaches the upstanding wall



325 and is collected in the so-called reservoir described earlier.

It is understood that the present invention is not restricted to the detailed description hereabove but that it
5 extends to the scope of the invention as specified in the claims.

The matter contained in each of the following claims is to be read as part of the general description of the present invention.

The claims defining the invention are as follows:

1. A dispensing closure comprising

- a spout element (300) adapted for being assembled with a corresponding container neck (500), and comprising an axially outwardly projecting pouring spout (301), a circumscribing wall (303) defining an essentially annular groove (305) around the spout (301), and drain means (307), the spout element (300) comprising fastening means (309, 311, 319) for assembling with the container neck (500);

- closure cap (100) adapted to be used as a measuring cup and equipped with fastening means (105) for assembling with the spout element (300);

characterized by the fact

- that the circumscribing wall (303) extends like a yoke (309) over the rim of the container neck (500) and projects into a skirt (311) which is essentially parallel to the circumscribing wall (303) and which is equipped with fastening means (319) on the inner side (317) of the skirt (311), for assembling with corresponding fastening means (503) on the container neck (500);

- that the circumscribing wall (303) has fastening means (315) on the surface (313) oriented to the pouring spout (301) for assembling with the closure cap (100);

- that the closure cap (100) comprises an essentially tubular measuring cup (101), the open end (103) of which being equipped with fastening means (105) adapted to mate with the corresponding fastening means (315) on the circumscribing wall (303) of the spout element (300);

- that the closure cap (100) comprises a spaced, surrounding, external wall (107) which is connected to the measuring cup (101) at a distance from the open end (103) thereof for protecting the user's hand; and



- that in the closed position of the closure cap (100), the said external wall (107) extends essentially to the level of the upward surface of the spout element yoke (309) that bridges the rim of the container neck (500).

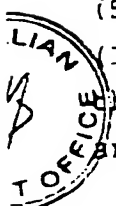
2. The dispensing closure of Claim 1 characterized in that the external wall (107) of the closure cap (100) is made of a resilient material and that the spout element (301) and the resilient external wall (107) of the closure cap have interacting locking means (115, 321) adapted to be unlocked by resilient deformation of the said external wall (107).

3. The dispensing closure according to Claim 2 characterized in that the interacting locking means consist in at least one, more preferably two opposed, essentially upwardly extending projections (321) solid or integral with the spout element yoke (309), and engaging with a corresponding notch (115) or with corresponding notches in the resilient external wall (107) of the closure cap (100).

4. The dispensing closure according to Claim 3 characterized in that the projection (321) is of the dovetail type showing in the direction of the central axis of the dispensing closure.

5. The dispensing closure according to any one of the preceding claims characterized in that the spout element yoke of the dispensing closure is equipped with an essentially upstanding breakable ring, which is fixed to the spout element yoke by means of breakable nibs (331) and which circumscribes the cap external wall (107) when the closure is in closed position.

6. The dispensing closure according to any one of the preceding claims characterized in that the fastening means (319) for assembling the spout element (300) with the container neck (500) consist in a thread located on the inner side of the skirt (311) and adapted to mate with a corresponding thread (503) on the outer surface of the container neck, preferably an asymmetric and/or interrupted thread designed to allow a snap assembly.



7. The dispensing closure according to any one of the preceding claims characterized in that the fastening means for assembling the closure cap with the spout element consist in a thread (315) arranged on the inwardly oriented surface of the circumscribing wall (303) and on the open end (109) of the measuring cup (101).

8. The dispensing closure according to any one of the preceding claims characterized in that the spout element (300) comprises downwardly oriented projections (327) that mate with corresponding ratchet means (505), arranged on the neck of the container.

9. The dispensing closure according to any one of the preceding claims characterized in that the spout element yoke (309) comprises an upstanding ring (325) on the rim of the yoke (309) which is directed towards the pouring spout (301), or a secondary spout (325) arranged on the rim of the yoke (309) directed towards the pouring spout (301), said secondary spout being oriented in the same way as spout (301) and preferably presenting essentially the same high as said spout (301).

10. The dispensing closure according to any one of the preceding claims characterized in that the measuring cup (111) has graduation bars (113) impregnated or embossed or otherwise made visible on the cup wall material, which is preferably of a translucent material.

11. The dispensing closure according to any one of the preceding claims characterized in that a first sealing area is arranged as a ball type seal between the circumscribing wall (303) and the inner surface of the container neck (500).

12. The dispensing closure according to any one of the preceding claims characterized in that a second sealing area is arranged between the closure cap (100) and the spout

element (300), on the surface of the circumscribing wall (303), close to the yoke (309), preferably on the ring (325).

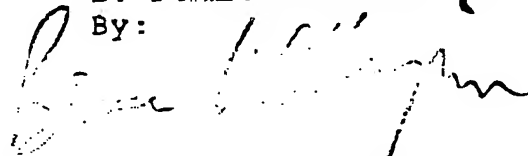
13. The dispensing closure according to any one of the preceding claims characterized in that it is of essentially
5 circular shape.

14. The dispensing closure according to any one of claims 1-12 characterized in that it is of essentially elliptical shape, the closure cap external wall (107) being elliptical and the spout element yoke (309) being essentially
0 elliptical, extended and projecting into a second skirt (329) in the long axis direction.

15. The dispensing closure of claim 1, substantially as hereinbefore described with reference to any one of the embodiments illustrated in the accompanying drawings.

DATED this 11th day of June 1997

MONSANTO EUROPE S.A.,
By its Patent Attorneys,
E. F. WELLINGTON & CO.,
By:



(B. S. Wellington)



ABSTRACT

The invention is directed to a dispensing closure which comprises :

- 5 -a spout element (300) adapted for being assembled with a corresponding container neck (500), and comprising a pouring spout (301), a circumscribing wall (303) defining an annular groove (305) and drain means (307), the circumscribing wall (303) comprising fastening means (315) for assembling with the container neck (500);
- 10 -a closure cap (100) adapted to be used as a measuring cup and equipped with fastening means (105) wherein;
- the circumscribing wall (303) extends like a yoke (309) over the rim of the container neck (500) and projects into
- 15 a skirt (311) equipped with fastening means (319) on the inner side (317) of the skirt (311), for assembling with corresponding fastening means (503) on the container neck (500);
- the circumscribing wall (303) has fastening means (315) on
- 20 the surface (313) oriented to the pouring spout (301);
- the closure cap (100) comprises an essentially tubular measuring cup (101), equipped with fastening means (105) adapted to mate with the corresponding fastening means (315) on the circumscribing wall (303) of the spout element (300);
- 25 -the closure cap (100) comprises a spaced surrounding secondary wall (107) which is connected to the measuring cup (101);
- the said secondary wall (107) extending essentially to the level of the upward surface of the spout element yoke (309)
- 30 that bridges the rim of the container neck (500), when in closed position.

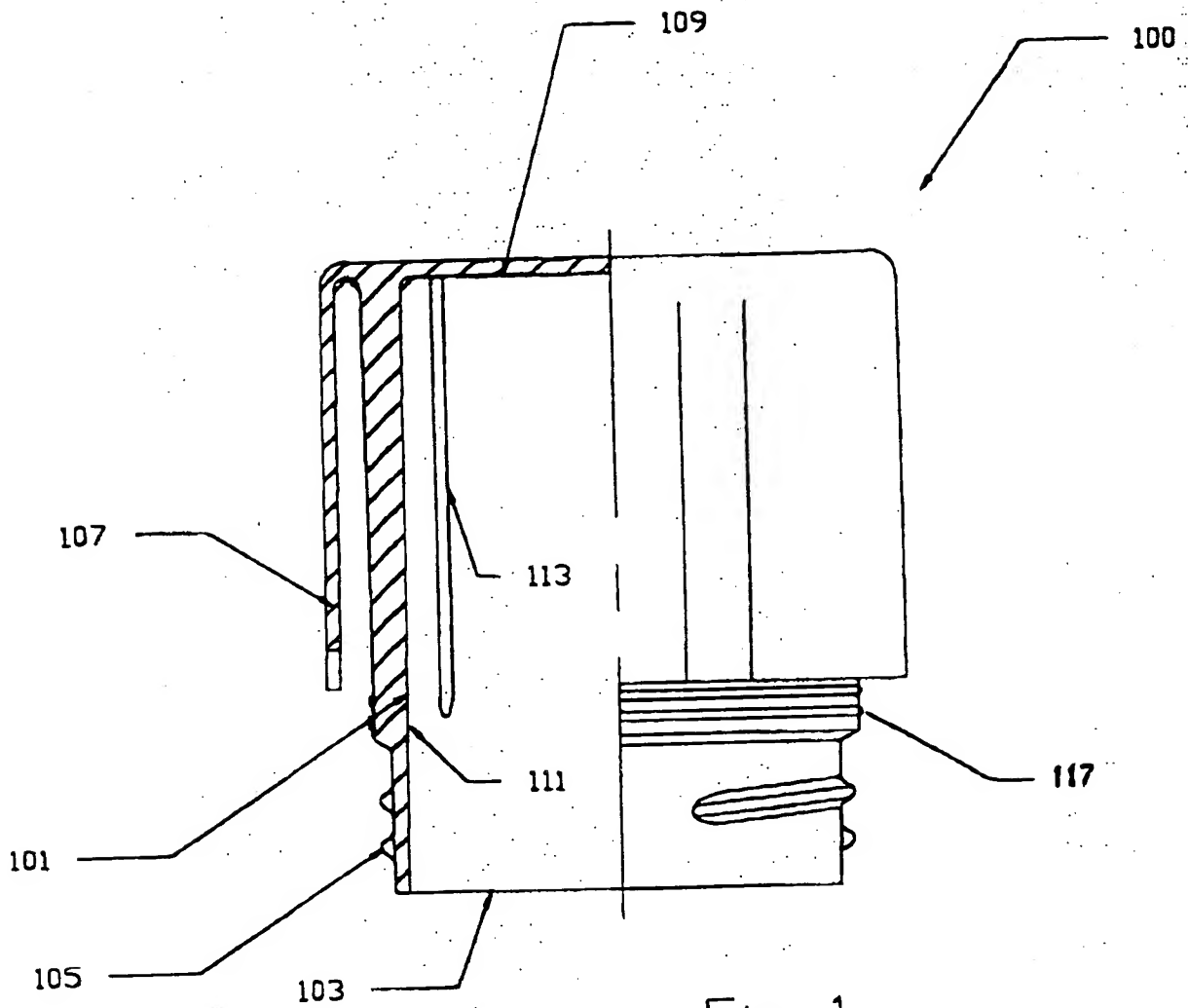
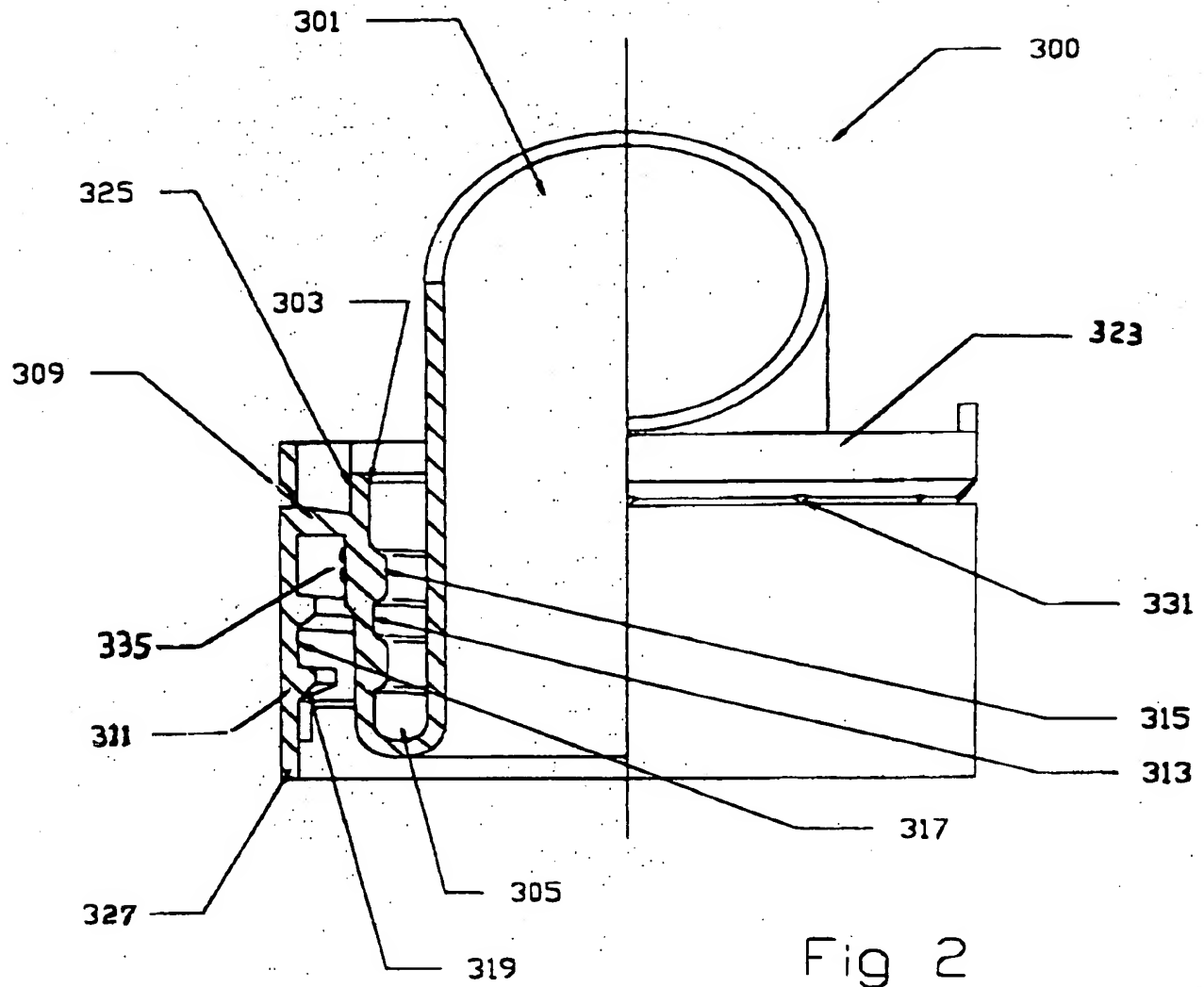


Fig 1



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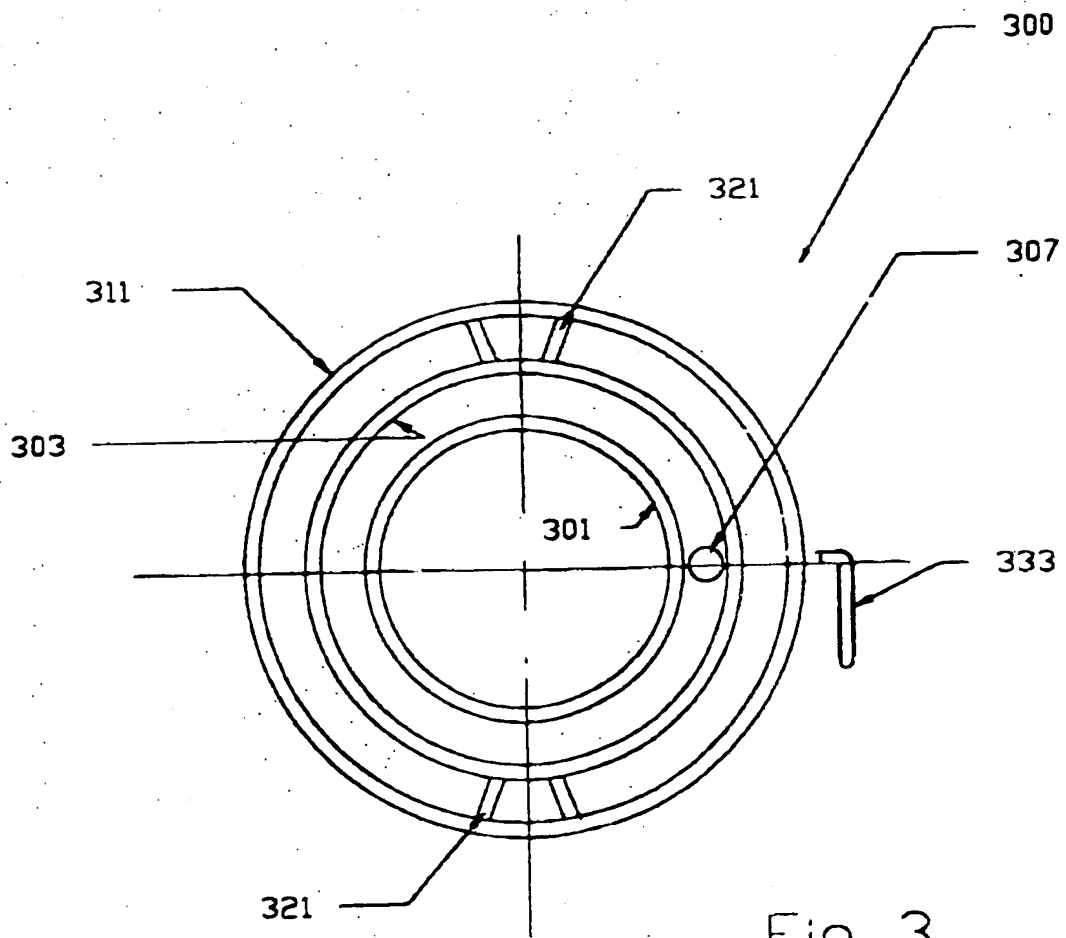


Fig 3

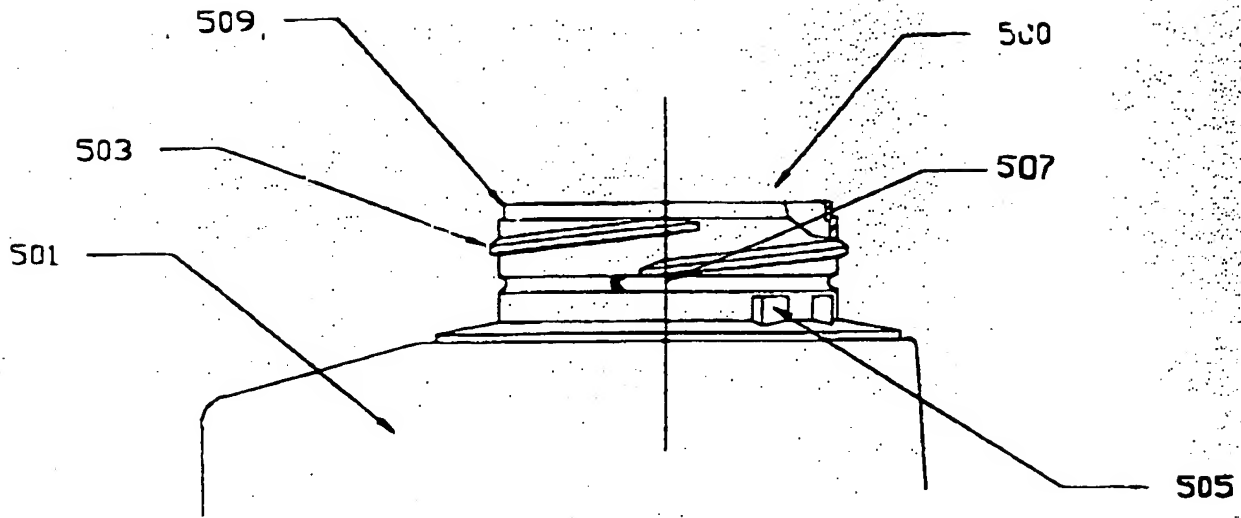


Fig 4

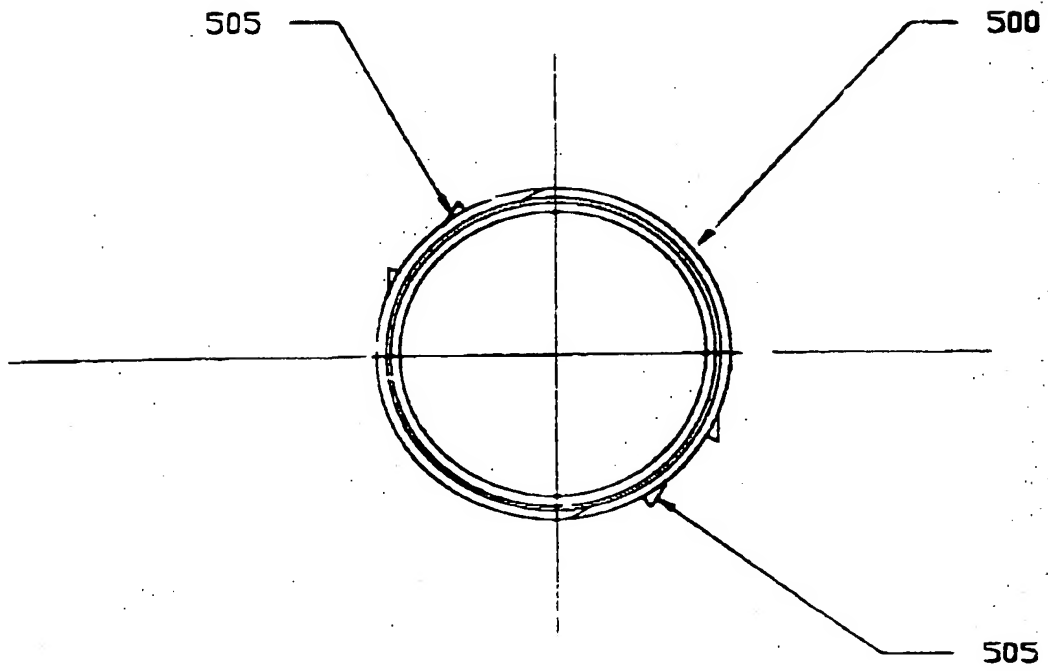


Fig 5

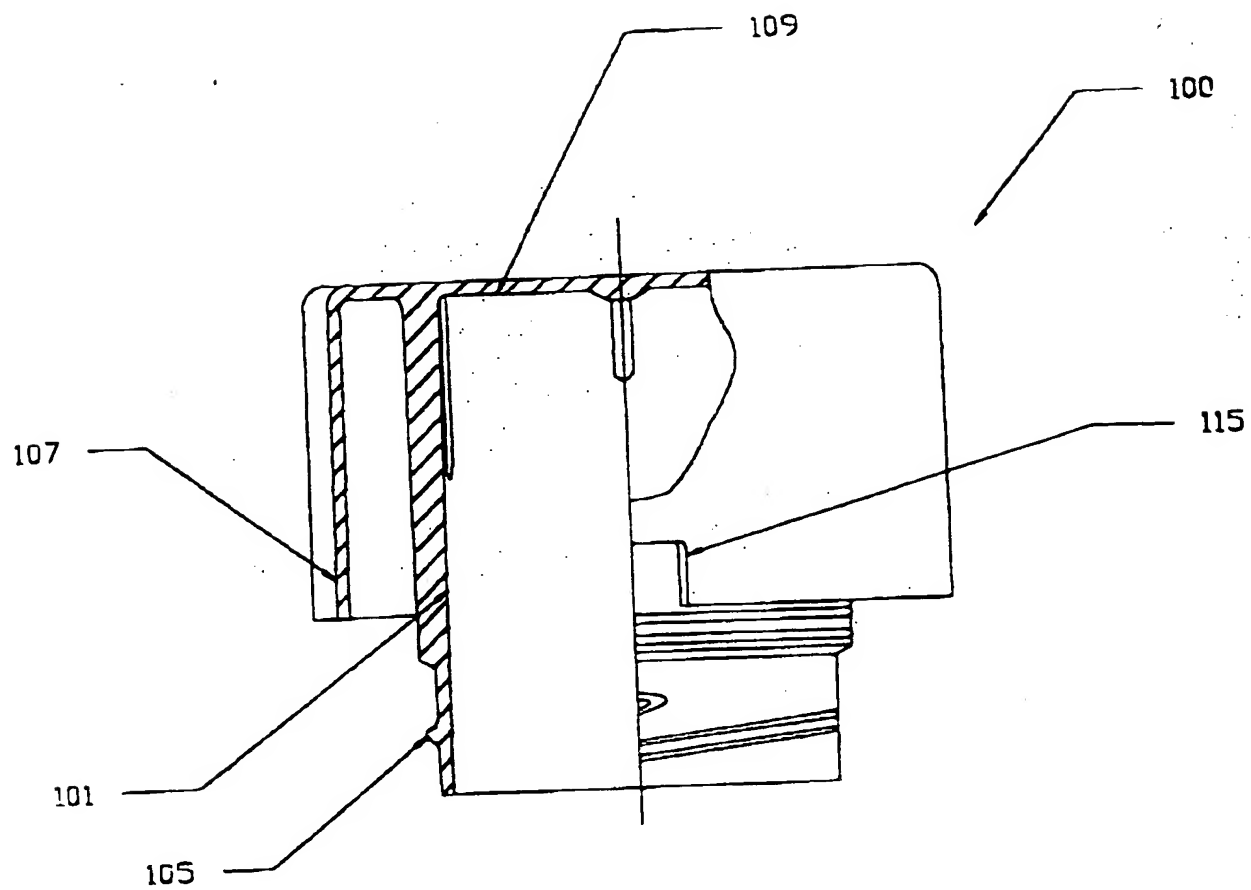


Fig 6

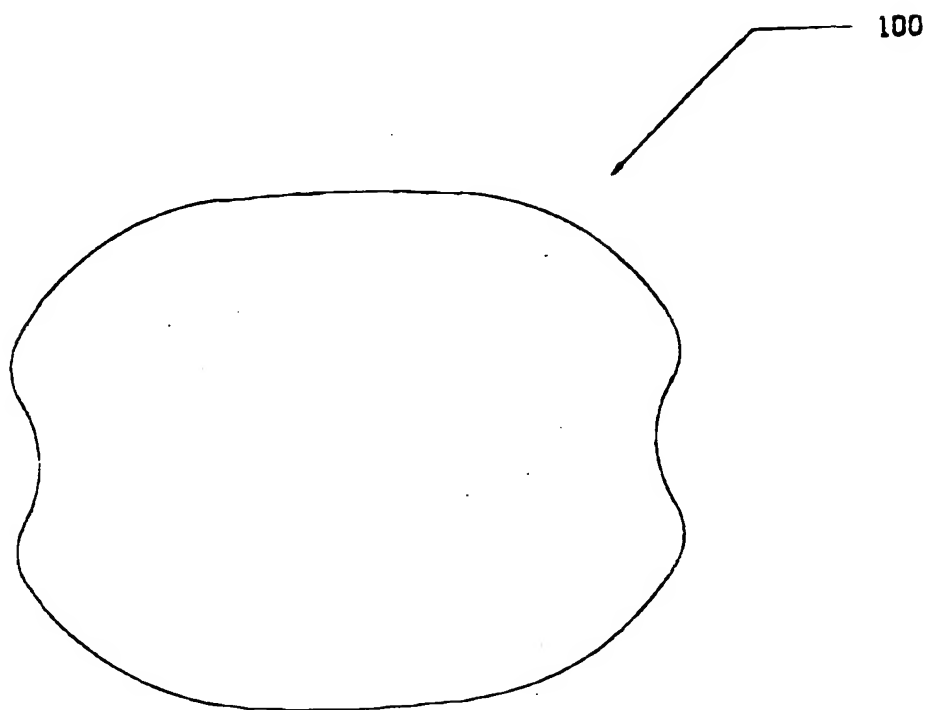


Fig 7

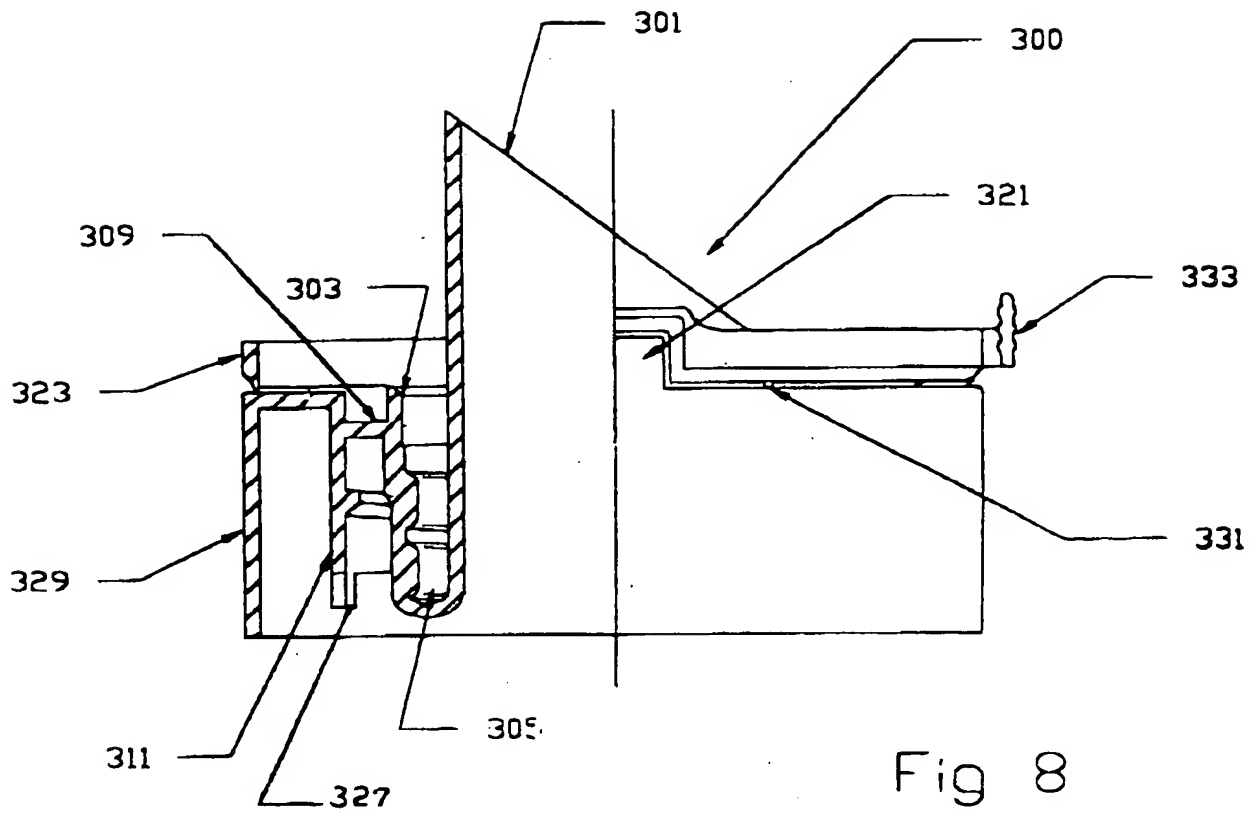


Fig 8

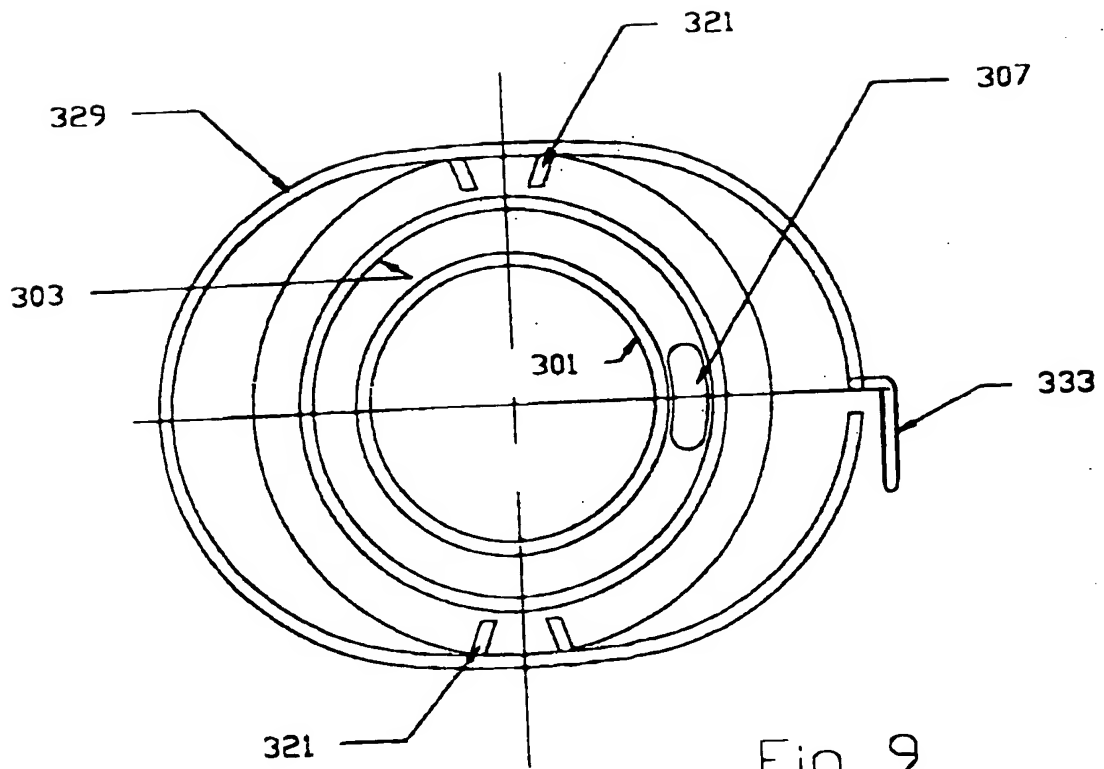
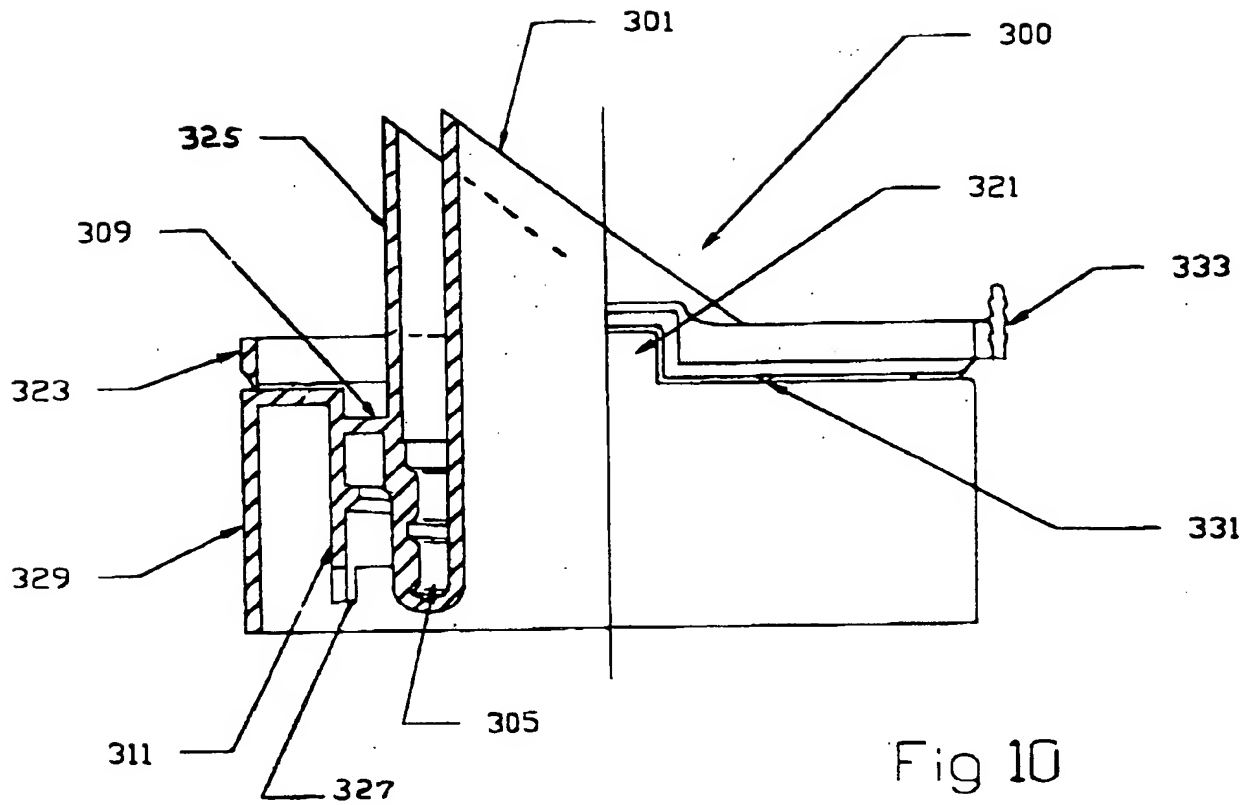


Fig 9



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